



SEQUENCE LISTING

<110> Jakobovits, Aya
Yang, Xiao-Dong
Gallo, Michael
Jia, Xiao-Chi

<120> Human Monoclonal Antibodies to Epidermal
Growth Factor Receptor

<130> Cell 4.20 CIP2

<140> 09/187,693

<141> 1998-11-05

<150> 09/162,280

<151> 1998-09-29

<150> 08/851,362

<151> 1997-05-05

<160> 75

<170> FastSEQ for Windows Version 4.0

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<212> DNA

<213> human

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24

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<211> 294

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180

ctgacctctg tgactgccgc ggacacggcc gtgtattact gtgcgagatc tacggtggtgta

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294

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tcaaggttca gtggaagtgg atctgggaca gattttactt tcaccatcag cggcctgcag 180
cctgaagaca ttgcaacata ttattgtcaa cagtatgaaa gtctcccact cactttcggc 240
ggagggacca aggtggagat caaa 264

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<211> 291
<212> DNA
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tccctcaaga gtcgagttac catatcacta gacacgtcta agaaccagtt ctccctgaag 180
ctgagttctg tgactgccgc ggacacggcc gtgtgttact gtgcgagaaa tatagtact 240
acgggtgctt ttgatattctg gggccaaggg acaatgggtca ccgtctcttc a 291

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ttaaggttca gtggaagtgg atctgggaca gattttactt tcaccatcag cagcctgcag 180
cctgaagata ttgcaacata ttactgtcaa cagtatgatc atctcccgt cactttcggc 240
ggcgggacca aggtggcgat caaa 264

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<211> 288
<212> DNA
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<400> 7
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tccctcaaga gtcgagtttc catgtcaata gacacgtctg agaaccagtt ctccctgaag 180
ctgagctctg tgactgccgc ggacacggcc gtgtattact gtgcgagaaa accagtgact 240
gggggggagg actactgggg ccagggaacc ctggtcaccg tctcctca 288

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<211> 262
<212> DNA
<213> human

<400> 8
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ccagggaag ccctaagctc ctgatctacg atgcttccaa tttggaaaca ggggtcccat 120
caaggttcag tggagtggat ctgggacaga ttttactttc accatcagca gcctgcagcc 180
tgaagatgtt ggaacatatg tctgtcaaca gtatgagagt ctcccgtgcg gttttggcca 240
ggggacaaaa ctggagatca aa 262

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 <213> human

<220>
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 <222> (1)...(291)
 <223> n = A,T,C or G

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 tccctcaaga gtcgagttac catgtcaata gacccgtcta agaaccagtt ctccctgaaa 180
 ctgatctctg tgactgccgc ggacacggcc gtttattact gtgcgacntc cctttactat 240
 ggcgggggta tggacgtctg gggccaaggg accacgggtca ccgtctcctc a 291

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<220>
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 tcaaggttca gtggaagtgg atctgggaca gattttactt tcacatcaa cagcctgcag 180
 cctgaagata ttgcgacata ttattgtcaa cactatgatc atctcccgtg gacgttcggc 240
 caagggacca aggtggaant caaa 264

<210> 11
 <211> 291
 <212> DNA
 <213> human

a!
 cont

<400> 11
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 gggaagggcc tggagtggat tgggcacatc tattacagtg ggagcaccta ctacatccc 120
 tccctcaaga gtcgaactac catatcagta gacacgtcta agaaccagtt ctccctgaag 180
 ctgaactctg tgactgccgc ggacacggcc gtgtattact gtgcgagagg gacagtaact 240
 acgtactact ttgactactg gggccaggga accctgggtca ccgtctcctc a 291

<210> 12
 <211> 270
 <212> DNA
 <213> human

<400> 12
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 tcaaggttca gtggcagtgg atctgggaca gatttcactc tcacatcag cagtctgcaa 180
 cctgaagatt ttgcaactta ctactgtcaa cagggttaca gaaccctcc ggagtgcagt 240

tttggccagg ggaccaagct ggagatcaaa

270

<210> 13
<211> 291
<212> DNA
<213> human

<400> 13
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gggaagggac tggagtggat tggacatctc tattacagtg ggaacaccaa ctacaacccc 120
tccctcaaga gtcgagtcac catatcatta gacacgtcca agaaccagtt ctccctgaag 180
ctgagctctg tgaccgtgc ggacacggcc gtgtattact gtgcgagaga ttttttgact 240
ggttccttct ttgactactg gggccaggga accctgggtca ccgtctcctc a 291

<210> 14
<211> 264
<212> DNA
<213> human

<400> 14
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tcaaggatca gtggaagtgg atctgggaca gattttactt tcaccatcag caacctgcag 180
cctgaagata ttgcaacata ttactgtcaa caatatgata gtctcccgt cactttcggc 240
ggagggacca aggtggagat caga 264

<210> 15
<211> 288
<212> DNA
<213> human

<400> 15
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gggaagggac tggagtggat tgggtatatc tattacagtg ggagcaccaa ttacaatccc 120
tccctcaaga gtcgagtcac catatcagta gacacgtcca agaaccagtt ctccctgaag 180
ctgagctctg tgaccgtgc ggacacggcc gtgtattact gtgcgagaga ctccatactg 240
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<210> 16
<211> 264
<212> DNA
<213> human

<220>
<221> misc_feature
<222> (1)...(264)
<223> n = A,T,C or G

<400> 16
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tcgaggttca gtggaagtgg atctgggaca gantntactt tcaccatcag cagcctgcag 180
cctgaagata ttgcnacata tcaactgtcna cagtatnata gtctcccgt cactttcggc 240
ggagggacca aggtagagat caaa 264

<210> 17
<211> 288

<212> DNA
<213> human

<400> 17
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gggaagggac tggagtggat tggacacatc tattacagtg ggaacaccaa ttataacccc 120
tccctcaaga gtcgactcac catatcaatt gacacgtcca agactcagtt ctccctgaag 180
ctgagttctg tgaccgctgc ggacacggcc atttattact gtgtgcgaga tcgagtgact 240
ggtgcttttg atatctgggg ccaagggaca atggtcaccg tctcttca 288

<210> 18
<211> 264
<212> DNA
<213> human

<400> 18
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ccagggaag cccctaaact cctgatctac gatgcatcca atttgaaac aggggtccca 120
tcaaggttca gtggaagtgg atctgggaca gattttactt tcaccatcag cagcctgcag 180
cctgaagata ttgcaacata tttctgtcaa cactttgatc atctcccgtc cgctttcggc 240
ggagggacca aggtggagat caaa 264

<210> 19
<211> 480
<212> DNA
<213> human

<220>
<221> misc_feature
<222> (1)...(480)
<223> n = A,T,C or G

<400> 19
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atatggtatg atggaagtaa taaatactat gcagactccg tgaagggccg attcaccatc 180
tccagagaca attccaagaa cacgctgtat ctgcaaatga acagactgag agccgaggac 240
acggctgtgt attactgtgc gagatttttg gagtgggtac cctttgacta ctggggccag 300
ggaaccctgg tcaccgtctn ctgagactcc accaagggcc catcggtctt cncctggcg 360
ccctgcttcc aggagcacc tcnganagca cananggcc ctgggactgn ctgntacaag 420
gactncttcc cctcnaaccn ggtgaccntn tcntgggaaa ctgagngcnc ntctnnatna 480

<210> 20
<211> 490
<212> DNA
<213> human

<220>
<221> misc_feature
<222> (1)...(490)
<223> n = A,T,C or G

<400> 20
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gggcattagc aatttttttag cctggtttca gcagaaacca gggatagccc ctaagtcctt 120
gatctatgct gcattccact tgcaaaagtgg ggtcccatca aagttcaccg gcagtggata 180
tgggacagat ttactctca ccatcagcag cctgcagcct gaagactttg caacttatta 240

ttgtcaacaa	tataatgttt	acccattcac	tttcggccct	gggaccaaag	tggatatcaa	300
acgaactgtg	gctgcacat	ctgtcttcat	cttcccgcc	tctgatgagc	aagttgaaat	360
ctggaactgc	ctctgtttgtg	tgcctgctga	ataacttcta	tcccagagag	gccaaagtac	420
agtggaaggt	ggataacgcc	ncnnttggcg	gnntcctttc	ntcnccent	cctcnncenn	480
cctctcncna						490

<210> 21
 <211> 449
 <212> DNA
 <213> human

<220>
 <221> misc_feature
 <222> (1)...(449)
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<400> 21						
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gatatcaact	gggtgcgaca	ggccactgga	caagggcttg	agtggatggg	atggatgaac	120
cctaacagtg	gtaacacagg	ctatgcacag	aagttccagg	gcagagtcac	catgaccagg	180
aacacctcca	taagcacagc	ctacatggag	ctgagcagcc	tgagatctga	ggacacggcc	240
gtgtattact	gtgagagagg	aggcccctat	agcagtggtc	ggaccttctt	tgactactgg	300
ggccagggaa	ccctgggtcac	cgtctcctca	gccctncacc	aagggcccat	cggctcttccc	360
cctggcgccc	tgctccagga	gcacctccga	gagcacagcg	nncccttggg	ctgcctggnn	420
caaggactct	ttcccnaac	cccggntga				449

<210> 22
 <211> 460
 <212> DNA
 <213> human

<220>
 <221> misc_feature
 <222> (1)...(460)
 <223> n = A,T,C or G

<400> 22						
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cagcgtgttt	tatacanctc	caacaataag	aactgcttag	cttggtagca	gcagaaacca	120
ggacagcctc	ctaagctgct	catttactgg	acatctaccc	gggaatccgg	ggtcccctgcc	180
cgattcagtg	gcagcgggtc	tgggacagat	ttcactctca	ccatcagcag	cctgcaggct	240
gaagatgtgg	cagtttatta	ctgtcagcaa	tattatagta	ctccactcac	tttcggcgga	300
gggaccatgg	tggagatcaa	gcgaactgtg	gctgcacat	ctgtcttcat	cttcccgcc	360
tctgatgagc	cngtntgaaa	tctggaactg	cctctgtttg	tgtgccctgc	tgaataactt	420
ctatcccaga	gaggccaaa	taccagtgg	aggtggataa			460

<210> 23
 <211> 465
 <212> DNA
 <213> human

<220>
 <221> misc_feature
 <222> (1)...(465)
 <223> n = A,T,C or G

<400> 23

a!
cont

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ggcatgcact	gggtccgcca	ggctccaggc	aaggggctgg	agtgggtggc	aattatatgg	120
tatgatggaa	gtaataaata	ctatgcagac	tccgtgaagg	gccgattcac	catctccaga	180
gacaattcca	agaacacgct	gtatctgcaa	atgaacagcc	tgagagccga	ggacacggct	240
gtgtattact	gtgcgagaga	cggggggcca	cggtggtttc	tcgcttctga	ctactggggc	300
cagggaaccc	tggtcaccgt	ctcctcagcc	tccaccaagg	gcccacgggt	cttccccctg	360
gcgccctgct	ccaggagcac	ccttcgagag	cacagcggcc	ctgggctgcc	tggttcaagg	420
actactttcc	ccgaaccggt	gacggtgtnc	gttggaaactc	atgac		465

<210> 24
 <211> 456
 <212> DNA
 <213> human

<220>
 <221> misc_feature
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 <223> n = A,T,C or G

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gncagagtat	tttatacagc	tccaacaatc	aaaaacttct	tagcttggtg	ccagcagaaa	120
ccaggacagc	ctccgaagtt	gctcatttac	tgggcatcta	ttcgggaatc	cggggtcctt	180
gaccgattca	gtggcagcgg	gtctgggaca	gatttcactc	tcaccatcag	cagcctgcag	240
gctgaagatg	tggcagttta	ttactgtcag	cagtattata	gtattccgtg	cacttttggc	300
caggggacca	agctggagat	caaacgaact	gtggctgcac	catctgtctt	catcttcccc	360
ccatctgatg	agcagttgaa	atctggaact	gcctctgttg	tgtgcctgct	gaataacttc	420
tatcccagaa	aggccaaagt	acatgaaggg	ttcaaa			456

<210> 25
 <211> 532
 <212> DNA
 <213> human

<220>
 <221> misc_feature
 <222> (1)...(532)
 <223> n = A,T,C or G

<400> 25						
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gacacggctg	tgtattactg	tgcgagagac	ggggggccac	ggtggtttct	cgcttctgac	300
tactggggcc	agggaaccct	ggtcaccgtc	tcctcagcct	ccaccaaggg	cccacgcgtc	360
ttccccctgg	cgccctgctc	caggagcacc	ttccgagagc	acagcggccc	tgggctgcct	420
ggtcaaggac	tacttccccg	aamcggtgac	ggtgtcgtgg	aactcaggcg	ctctgaccag	480
nggcgtgcac	aattcccagc	ngtcctnaag	gttgaaatcg	taanggttca	aa	532

<210> 26
 <211> 463
 <212> DNA
 <213> human

<220>
 <221> misc_feature

a'
Cont.

<222> (1)...(463)

<223> n = A,T,C or G

<400> 26

actcagtctc	cagactccct	ggctgtgtct	ctgggcgaga	gggccaccat	caactgcaag	60
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aaaccaggac	agcctcctaa	gctgctcatt	tactgggcat	ctacccggga	atccggggtc	180
cctgaccgat	tcaggggag	cgggtctagg	acagatttca	ctctcaccat	cagcagcctg	240
caggctgaag	atgtggcagt	ttactttctgt	caccaatatt	atagtactcc	gtggacgttc	300
ggccaaggga	ccaaggtgga	aatcaaacga	actgtggctg	caccatctgt	cttcattcttc	360
ccgccatctg	atgagcagtt	gaaatctgga	actgcctctg	ttgtgtgcct	gctgaataac	420
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<210> 27

<211> 417

<212> DNA

<213> human

<220>

<221> misc_feature

<222> (1)...(417)

<223> n = A,T,C or G

<400> 27

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atatggtatg	atggaagtag	caaatactat	gcagactccg	ngaagggccg	attcaccatc	180
tccagagaca	attccaagaa	cacgctgtat	ctgcaaatga	acagcctgag	agccgaggac	240
acggctgatg	tattactgtg	cgagagacgg	ttggggcacg	gtggcttctc	gcttctgact	300
actggngcnc	agggcaacnc	tgnctnaccg	tnttcctcan	ccctntacnc	aagggccncc	360
attnggtctt	tccccctg	nnnncctgct	cnatgnnnca	ccctncgaca	ncnacan	417

<210> 28

<211> 453

<212> DNA

<213> human

<220>

<221> misc_feature

<222> (1)...(453)

<223> n = A,T,C or G

<400> 28

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ttatacagct	ccaacaatca	aaacttctta	gcttgggtacc	agcagaaacc	aggacagcct	120
ccgaagtgtc	tcattttactg	ggcatctatt	cgggaatccg	gggtccctga	ccgattcagt	180
ggcagcgggt	ctgggacaga	tttactcttc	accatcagca	gcctgcaggc	tgaagatgtg	240
gcagtttatt	actgtcagca	gtattatagt	attccgtgca	cttttgcca	ggggaccaag	300
ctggagatca	aacgaactgt	ggctgcacca	tctgtcttca	tcttcccgcc	atctgatgag	360
ccaagnttga	aaatctggaa	ctgcctctgt	tgtgtgccct	gcttgaataa	cttctatccc	420
agaganggcc	aaagtccngt	ggaagggtgga	tac			453

<210> 29

<211> 349

<212> DNA

<213> human

<220>
 <221> misc_feature
 <222> (1)...(349)
 <223> n = A,T,C or G

<400> 29
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 cccgnaggga agggactgga gtggattggg tgtttctatt acagngggag caccaactac 120
 aaccctccc tnaagagtca tgtcaccata tcagtagaca cgtccaagaa ccagttctac 180
 ntgaagctga gctntgtgac cgntgcggac acggnccnga ataactngc nagagatagg 240
 ggagnaggnn ntggcntnct actntgacta ctgaggccag ngaaccntgg ntcacagtaa 300
 tccntaagnc tnncaancaa angngnccca angnganacn tnnctncnc 349

<210> 30
 <211> 476
 <212> DNA
 <213> human

<220>
 <221> misc_feature
 <222> (1)...(476)
 <223> n = A,T,C or G

<400> 30
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 cctaagctgc tcatttactg ggcattctacc cgggaatccg ggggccctga ccgattcagg 180
 ggagcgggt ctaggacaga tttcactctc accatcagca gcctgcaggc tgaagatgtg 240
 gcagtttact tctgtcacca atattatagt actccgtgga cgttcggcca agggaccaag 300
 gtggaaatca aacgaactgt ggctgcacca tctgtcttca tcttcccgcc atctgatgag 360
 caccttgaat ttctggaact gcctctgntg ngctgcctgt gaacnaactc tatccccaga 420
 ganggcccaa aagnttcaag nnggnnaggc nngataacgc ctnttcncn ncntnc 476

<210> 31
 <211> 471
 <212> DNA
 <213> human

<220>
 <221> misc_feature
 <222> (1)...(471)
 <223> n = A,T,C or G

<400> 31
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 ggttactact ggagctggat ccgccagcac ccaggaagg gcctggagtg gattgggtac 120
 atctataaca gtgggagcac ctactacaac ccgtccctcc agagtcgagt taccatatca 180
 gtagacacgt ctaagaacca gttctccctg aagctgagct ctgtgactgc cgcgacacg 240
 gccgtgtatt actgtgcggg tcagaaatgg tcctactact actactacgg tatggacgtc 300
 tggggccaag ggaccacggt caccgtctcc tnagcctcca ccaanggcc atcggctctc 360
 ccctggcgc cctgntctag gagcacctcc canagcacag acggatnctg ggccctgcctg 420
 natcaatgga ctactttccc cgaaccggtt gnntgtgmn cctggnaact n 471

<210> 32
 <211> 456
 <212> DNA
 <213> human

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<220>
 <221> misc_feature
 <222> (1)...(456)
 <223> n = A,T,C or G

<400> 32
 aagcctttng agaccntgcc cctcacctgc actgtctctg gtggctccat cagtaattac 60
 tactggagct ggatccggca gccccaggg aagggactgg agtggattgg gtatatctat 120
 tacagtggga gcaccaacta caaccctcc ctcaagagtc gagtcccat atcagtagac 180
 acgtccaaga accagttctc cctgaagctg agctctgtga ccgctgcgga cacggccgtg 240
 tattactgtg cgagagggcc cggggggagc tactactact acggtatgga cgtctggggc 300
 caagggacca cggtcaccgt ctctcagcg tccaccaagg gcccatcggg cttccccctg 360
 gcgccctgct ccaggagcac ctccgagagc acagcggccc tgggctgcct gggtaagga 420
 ctacttcccc gaaccgggtga cgggtgttcn nggaac 456

<210> 33
 <211> 394
 <212> DNA
 <213> human

<400> 33
 ctgtctgcat ctgtaggaga cagagtcata atcacttgcc gggcaagtca aaacatcacc 60
 gaccatttaa attggtatca gcagatagca ggaaaagccc ctagggcccct gatatacact 120
 gcatccagtt tgcaagggtg ggtcccatca aggttcagtg gcagtggatc tgggacagat 180
 ttactctca ccatcagcag tctgcaacct gaagattttt caacttacta ctgtcaacag 240
 agttacagta ccccggtgcag ttttggccag gggaccaagc tggagatcaa acgaactgtg 300
 gctgcaccat ctgtcttcat cttcccgcca tctgatgagc agttgaaatc tggaactgcc 360
 tctgttgtgt gcctgctgaa taacttctat ccca 394

<210> 34
 <211> 310
 <212> DNA
 <213> human

<220>
 <221> misc_feature
 <222> (1)...(310)
 <223> n = A,T,C or G

<400> 34
 gtgaaggctc cctgcaaggc ttctggatac accttcagcg gctactatat gcactgggtg 60
 cgacaggccc ctggacaagg gcttgagtgg atgggatcga tccaccctaa cagtgggtggc 120
 anaaactttg cacagaagtt tcagggcagg gtcacatga ccagggacac gtccatcaac 180
 acagcctact tggagctgag caggctgaga tctgacgaca cggccgtgta ttactgtgcg 240
 agagataaaa actacggtga ctacgtcttt gactattggg gccagggaac cctgggtcacc 300
 gtctcctcag 310

<210> 35
 <211> 76
 <212> PRT
 <213> human

<400> 35
 Val Ser Gly Gly Ser Ile Ser Ser Gly Gly Tyr Tyr Trp Ser Trp Ile
 1 5 10 15
 Arg Gln His Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr

		20						25					30				
Ser	Gly	Ser	Thr	Tyr	Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile		
		35					40					45					
Ser	Val	Asp	Thr	Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val		
	50					55					60						
Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg						
65					70					75							

<210> 36
 <211> 76
 <212> PRT
 <213> human

Thr	Ile	Thr	Cys	Gln	Ala	Ser	Gln	Asp	Ile	Ser	Asn	Tyr	Leu	Asn	Trp		
1				5				10						15			
Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile	Tyr	Asp	Ala		
			20					25					30				
Ser	Asn	Leu	Glu	Thr	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser		
		35					40					45					
Gly	Thr	Asp	Phe	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile		
	50					55					60						
Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Tyr	Asp	Asn	Leu	Pro						
65					70					75							

<210> 37
 <211> 76
 <212> PRT
 <213> human

Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Ser	Ser	Tyr	Leu	Asn	Trp		
1				5				10						15			
Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile	Tyr	Ala	Ala		
			20					25					30				
Ser	Ser	Leu	Gln	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser		
		35					40					45					
Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe		
	50					55					60						
Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Ser	Tyr	Ser	Thr	Pro						
65					70					75							

<210> 38
 <211> 76
 <212> PRT
 <213> human

Val	Ser	Gly	Gly	Ser	Val	Ser	Ser	Gly	Ser	Tyr	Tyr	Trp	Ser	Trp	Ile		
1				5				10						15			
Arg	Gln	Pro	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Tyr	Tyr		
			20					25					30				
Ser	Gly	Ser	Thr	Asn	Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile		
		35					40					45					
Ser	Val	Asp	Thr	Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val		
	50					55					60						
Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg						

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65

70

75

<210> 39
 <211> 100
 <212> PRT
 <213> human

<400> 39

Val	Ser	Gly	Gly	Ser	Ile	Asn	Ser	Gly	Asp	Tyr	Tyr	Trp	Ser	Trp	Ile
1				5					10					15	
Arg	Gln	His	Pro	Gly	Lys	Gly	Leu	Asp	Cys	Ile	Gly	Tyr	Ile	Tyr	Tyr
			20					25					30		
Ser	Gly	Ser	Thr	Tyr	Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile
			35				40					45			
Ser	Val	Asp	Thr	Ser	Lys	Asn	Gln	Phe	Phe	Leu	Lys	Leu	Thr	Ser	Val
			50			55					60				
Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Thr	Val	Val
65					70					75					80
Ala	Ser	Asn	Pro	Gly	Trp	Phe	Asp	Pro	Trp	Gly	Gln	Gly	Thr	Leu	Val
				85					90					95	
Thr	Val	Ser	Ser												
				100											

<210> 40
 <211> 105
 <212> PRT
 <213> human

<400> 40

Thr	Ile	Thr	Cys	Gln	Ala	Ser	Gln	Asp	Ile	Asn	Asn	Tyr	Leu	Asn	Trp
1				5					10					15	
Phe	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Val	Leu	Ile	His	Asp	Ala
			20					25					30		
Ser	Asn	Leu	Glu	Thr	Gly	Gly	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser
			35				40					45			
Gly	Thr	Asp	Phe	Thr	Phe	Thr	Ile	Ser	Gly	Leu	Gln	Pro	Glu	Asp	Ile
			50			55					60				
Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Tyr	Glu	Ser	Leu	Pro	Leu	Thr	Phe	Gly
65					70					75					80
Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val
				85					90					95	
Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln							
			100					105							

<210> 41
 <211> 97
 <212> PRT
 <213> human

<400> 41

Val	Ser	Gly	Gly	Ser	Ile	Asn	Ser	Gly	Asp	Tyr	Tyr	Trp	Ser	Trp	Ile
1				5					10					15	
Arg	Gln	His	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	Ser	Ile	Tyr	Tyr
			20					25					30		
Ser	Gly	Asn	Thr	Phe	Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile
			35				40					45			
Ser	Leu	Asp	Thr	Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val

50 55 60
 Thr Ala Ala Asp Thr Ala Val Cys Tyr Cys Ala Arg Asn Ile Val Thr
 65 70 75 80
 Thr Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser
 85 90 95
 Ser

<210> 42
 <211> 105
 <212> PRT
 <213> human

<400> 42
 Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Thr Ile Tyr Leu Asn Trp
 1 5 10 15
 Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Asn Asp Ala
 20 25 30
 Ser Ser Leu Glu Thr Gly Val Pro Leu Arg Phe Ser Gly Ser Gly Ser
 35 40 45
 Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile
 50 55 60
 Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp His Leu Pro Leu Thr Phe Gly
 65 70 75 80
 Gly Gly Thr Lys Val Ala Ile Lys Arg Thr Val Ala Ala Pro Ser Val
 85 90 95
 Phe Ile Phe Pro Pro Ser Asp Glu Gln
 100 105

<210> 43
 <211> 96
 <212> PRT
 <213> human

<400> 43
 Val Ser Gly Gly Ser Ile Ser Ser Gly Asp Tyr Tyr Trp Thr Trp Ile
 1 5 10 15
 Arg Gln His Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr
 20 25 30
 Ser Gly Asn Thr Tyr Tyr Asn Pro Ser Leu Lys Ser Arg Val Ser Met
 35 40 45
 Ser Ile Asp Thr Ser Glu Asn Gln Phe Ser Leu Lys Leu Ser Ser Val
 50 55 60
 Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Arg Lys Pro Val Thr
 65 70 75 80
 Gly Gly Glu Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 85 90 95

<210> 44
 <211> 105
 <212> PRT
 <213> human

<400> 44
 Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn Trp
 1 5 10 15
 Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Asp Ala

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			20					25					30				
Ser	Asn	Leu	Glu	Thr	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser		
		35					40					45					
Gly	Thr	Asp	Phe	Thr	Phe	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Ile		
	50					55					60						
Val	Gly	Tyr	Tyr	Val	Gln	Gln	Tyr	Glu	Ser	Leu	Pro	Cys	Gly	Phe	Gly		
65					70					75					80		
Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val		
			85						90					95			
Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln									
			100					105									

<210> 45
 <211> 97
 <212> PRT
 <213> human

Val	Ser	Gly	Gly	Ser	Ile	Asn	Ser	Gly	Asp	Phe	Tyr	Trp	Ser	Trp	Ile		
1				5				10					15				
Arg	Gln	His	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Tyr	Tyr		
			20					25					30				
Ser	Gly	Ser	Thr	Tyr	Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Met		
	35					40					45						
Ser	Ile	Asp	Pro	Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ile	Ser	Val		
	50					55					60						
Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Thr	Ser	Leu	Tyr	Tyr		
65					70				75						80		
Gly	Gly	Gly	Met	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser		
				85				90						95			

Ser

<210> 46
 <211> 105
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(105)
 <223> Xaa = Any Amino Acid

Thr	Ile	Thr	Cys	Gln	Ala	Ser	Gln	Asp	Ile	Ser	Asn	Asn	Leu	Asn	Trp		
1				5				10					15				
Tyr	Gln	Gln	Lys	Arg	Gly	Asn	Ala	Pro	Lys	Leu	Leu	Ile	Tyr	Asp	Ala		
			20					25					30				
Ser	Asn	Leu	Glu	Thr	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser		
	35					40					45						
Gly	Thr	Asp	Phe	Thr	Phe	Thr	Ile	Ser	Asn	Leu	Gln	Pro	Glu	Asp	Ile		
	50					55					60						
Ala	Thr	Tyr	Tyr	Cys	Gln	His	Tyr	Asp	His	Leu	Pro	Trp	Thr	Phe	Gly		
65					70				75						80		
Gln	Gly	Thr	Lys	Val	Glu	Xaa	Lys	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val		
			85					90						95			

Phe Ile Phe Pro Pro Ser Asp Glu Gln

100

105

<210> 47
 <211> 97
 <212> PRT
 <213> human

<400> 47

Val	Ser	Gly	Gly	Ser	Ile	Asn	Asn	Gly	Asp	Tyr	Tyr	Trp	Ser	Trp	Ile
1				5					10					15	
Arg	Gln	His	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	His	Ile	Tyr	Tyr
			20					25					30		
Ser	Gly	Ser	Thr	Tyr	Tyr	Ile	Pro	Ser	Leu	Lys	Ser	Arg	Thr	Thr	Ile
			35				40					45			
Ser	Val	Asp	Thr	Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Asn	Ser	Val
	50					55					60				
Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Gly	Thr	Val	Thr
65					70					75					80
Thr	Tyr	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser
				85					90					95	

Ser

<210> 48
 <211> 107
 <212> PRT
 <213> human

<400> 48

Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Ser	Ile	Ser	Ser	Tyr	Leu	Asn	Trp
1				5					10					15	
Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile	Tyr	Ala	Ala
			20					25					30		
Ser	Ser	Leu	Gln	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser
			35				40					45			
Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe
	50					55					60				
Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Gly	Tyr	Arg	Thr	Pro	Pro	Glu	Cys	Ser
65					70					75					80
Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala	Pro
				85					90					95	
Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln					
			100					105							

<210> 49
 <211> 97
 <212> PRT
 <213> human

<400> 49

Val	Ser	Gly	Gly	Ser	Val	Ser	Ser	Gly	Asp	Tyr	Tyr	Trp	Ser	Trp	Ile
1				5					10					15	
Arg	Gln	Pro	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	His	Leu	Tyr	Tyr
			20					25					30		
Ser	Gly	Asn	Thr	Asn	Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile
			35				40					45			
Ser	Leu	Asp	Thr	Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val

50		55		60											
Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Asp	Phe	Leu	Thr
65					70					75					80
Gly	Ser	Phe	Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser
				85					90					95	

Ser

<210> 50
 <211> 105
 <212> PRT
 <213> human

<400> 50

Thr	Ile	Thr	Cys	Gln	Ala	Ser	Gln	Asp	Ile	Ser	Asn	Tyr	Leu	Asn	Trp
1				5					10					15	
Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile	Asn	Asp	Ala
			20					25					30		
Ser	Asp	Leu	Glu	Thr	Gly	Val	Pro	Ser	Arg	Ile	Ser	Gly	Ser	Gly	Ser
		35					40					45			
Gly	Thr	Asp	Phe	Thr	Phe	Thr	Ile	Ser	Asn	Leu	Gln	Pro	Glu	Asp	Ile
	50					55					60				
Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Tyr	Asp	Ser	Leu	Pro	Leu	Thr	Phe	Gly
65					70					75					80
Gly	Gly	Thr	Lys	Val	Glu	Ile	Arg	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val
			85						90					95	
Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln							
			100					105							

<210> 51
 <211> 96
 <212> PRT
 <213> human

<400> 51

Val	Ser	Gly	Gly	Ser	Val	Tyr	Ser	Gly	Asp	Tyr	Tyr	Trp	Ser	Trp	Ile
1				5					10					15	
Arg	Gln	Pro	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Tyr	Tyr
			20					25					30		
Ser	Gly	Ser	Thr	Asn	Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile
		35				40					45				
Ser	Val	Asp	Thr	Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val
	50					55					60				
Thr	Ala	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Asp	Ser	Ile	Leu
65					70					75					80
Gly	Ala	Thr	Asn	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser
			85						90					95	

<210> 52
 <211> 105
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(105)
 <223> Xaa = Any Amino Acid

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Cont

<400> 52

Thr Ile Thr Cys Gln Ala Ser Gln Xaa Ile Ser Asn Tyr Leu Xaa Trp
1 5 10 15
Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Xaa Leu Ile Ser Asp Ala
20 25 30
Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
35 40 45
Gly Thr Xaa Xaa Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile
50 55 60
Ala Thr Tyr His Cys Xaa Gln Tyr Xaa Ser Leu Pro Leu Thr Phe Gly
65 70 75 80
Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val
85 90 95
Phe Ile Phe Pro Pro Ser Asp Glu Gln
100 105

<210> 53

<211> 95

<212> PRT

<213> human

<400> 53

Val Ser Gly Gly Ser Val Ser Ser Gly Asp Tyr Tyr Trp Thr Trp Ile
1 5 10 15
Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Ile Gly His Ile Tyr Tyr
20 25 30
Ser Gly Asn Thr Asn Tyr Asn Pro Ser Leu Lys Ser Arg Leu Thr Ile
35 40 45
Ser Ile Asp Thr Ser Lys Thr Gln Phe Ser Leu Lys Leu Ser Ser Val
50 55 60
Thr Ala Ala Asp Thr Ala Ile Tyr Tyr Cys Val Arg Asp Arg Val Thr
65 70 75 80
Gly Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Ser Ser
85 90 95

<210> 54

<211> 105

<212> PRT

<213> human

<400> 54

Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn Trp
1 5 10 15
Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Asp Ala
20 25 30
Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser
35 40 45
Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile
50 55 60
Ala Thr Tyr Phe Cys Gln His Phe Asp His Leu Pro Leu Ala Phe Gly
65 70 75 80
Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val
85 90 95
Phe Ile Phe Pro Pro Ser Asp Glu Gln
100 105

<210> 55
 <211> 160
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(160)
 <223> Xaa = Any Amino Acid

<400> 55
 Ala Ile Gln Pro Phe Arg Ser Met Pro Phe Ser Cys Xaa Ala Ser Gly
 1 5 10 15
 Phe Pro Phe Ser Xaa Xaa Gly Met His Trp Val Arg Gln Ala Pro Gly
 20 25 30
 Lys Gly Leu Glu Trp Val Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys
 35 40 45
 Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn
 50 55 60
 Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Arg Leu Arg Ala Glu Asp
 65 70 75 80
 Thr Ala Val Tyr Tyr Cys Ala Arg Phe Leu Glu Trp Leu Pro Phe Asp
 85 90 95
 Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Xaa Ser Asp Ser Thr Lys
 100 105 110
 Gly Pro Ser Val Phe Xaa Leu Ala Pro Cys Phe Gln Glu His Pro Xaa
 115 120 125
 Xaa Ala Xaa Xaa Ala Pro Gly Thr Xaa Xaa Tyr Lys Asp Xaa Phe Pro
 130 135 140
 Ser Asn Xaa Val Thr Xaa Ser Trp Glu Thr Gln Xaa Xaa Ser Xaa Xaa
 145 150 155 160

<210> 56
 <211> 161
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(161)
 <223> Xaa = Any Amino Acid

<400> 56
 Gly Thr Phe Xaa Phe Ala Pro Phe Gly Xaa Arg Pro Xaa Ile Thr Cys
 1 5 10 15
 Arg Ala Ser Gln Gly Ile Ser Asn Phe Leu Ala Trp Phe Gln Gln Lys
 20 25 30
 Pro Gly Ile Ala Pro Lys Ser Leu Ile Tyr Ala Ala Ser Thr Leu Gln
 35 40 45
 Ser Gly Val Pro Ser Lys Phe Thr Gly Ser Gly Tyr Gly Thr Asp Phe
 50 55 60
 Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr
 65 70 75 80
 Cys Gln Gln Tyr Asn Val Tyr Pro Phe Thr Phe Gly Pro Gly Thr Lys
 85 90 95
 Val Asp Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro
 100 105 110

Pro	Ser	Asp	Glu	Pro	Val	Glu	Ile	Trp	Asn	Cys	Leu	Cys	Cys	Val	Pro
		115					120					125			
Ala	Glu	Leu	Leu	Ser	Gln	Arg	Gly	Gln	Ser	Thr	Val	Glu	Gly	Gly	Arg
	130					135					140				
Xaa	Xaa	Trp	Arg	Xaa	Pro	Phe	Xaa	Xaa	Pro	Ser	Ser	Xaa	Xaa	Leu	Ser
145					150					155					160
Xaa															

<210> 57
 <211> 149
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(149)
 <223> Xaa = Any Amino Acid

Lys	Pro	Val	Ala	Ser	Val	Gln	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr
1				5					10					15	
Phe	Thr	Ser	Tyr	Asp	Ile	Asn	Trp	Val	Arg	Gln	Ala	Thr	Gly	Gln	Gly
			20				25						30		
Leu	Glu	Trp	Met	Gly	Trp	Met	Asn	Pro	Asn	Ser	Gly	Asn	Thr	Gly	Tyr
	35					40						45			
Ala	Gln	Lys	Phe	Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asn	Thr	Ser	Ile
	50					55					60				
Ser	Thr	Ala	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala
65					70					75					80
Val	Tyr	Tyr	Cys	Ala	Arg	Gly	Gly	Pro	Tyr	Ser	Ser	Gly	Trp	Thr	Phe
			85						90					95	
Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Leu
			100					105					110		
His	Gln	Gly	Pro	Ile	Gly	Leu	Pro	Pro	Gly	Ala	Leu	Leu	Gln	Glu	His
	115						120					125			
Leu	Pro	Glu	His	Xaa	Xaa	Pro	Leu	Gly	Cys	Leu	Xaa	Gln	Gly	Leu	Phe
	130					135					140				
Pro	Xaa	Thr	Pro	Xaa											
145															

<210> 58
 <211> 151
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(151)
 <223> Xaa = Any Amino Acid

Phe	Glu	Pro	Phe	Xaa	Ala	Val	Ser	Leu	Gly	Ala	Arg	Ala	Thr	Ile	Asn
1				5					10					15	
Cys	Lys	Ser	Ser	Gln	Arg	Val	Leu	Tyr	Xaa	Ser	Asn	Asn	Lys	Asn	Cys
			20					25					30		
Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro	Lys	Leu	Leu	Ile

<400> 60

Ser	Leu	Gln	Thr	Pro	Trp	Leu	Cys	Leu	Trp	Ala	Arg	Gly	Pro	Pro	Ser
1				5					10					15	
Thr	Ala	Ser	Pro	Xaa	Arg	Val	Phe	Tyr	Thr	Ala	Pro	Thr	Ile	Lys	Asn
			20					25					30		
Phe	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro	Lys	Leu	Leu
		35					40					45			
Ile	Tyr	Trp	Ala	Ser	Ile	Arg	Glu	Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser
	50					55					60				
Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln
65					70					75					80
Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Tyr	Tyr	Ser	Ile	Pro
				85					90					95	
Cys	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Thr	Val	Ala
			100					105					110		
Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser
		115					120					125			
Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Lys
	130					135					140				
Ala	Lys	Val	His	Glu	Gly	Phe	Lys								
145					150										

<210> 61

<211> 177

<212> PRT

<213> human

<220>

<221> VARIANT

<222> (1)...(177)

<223> Xaa = Any Amino Acid

<400> 61

a1 cont.

Gly	Val	Xaa	Gln	Pro	Xaa	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser
1				5					10					15	
Gly	Phe	Xaa	Phe	Ser	Xaa	Tyr	Gly	Met	His	Trp	Val	Arg	Gln	Ala	Pro
			20					25					30		
Gly	Lys	Gly	Leu	Glu	Trp	Val	Ala	Ile	Ile	Trp	Tyr	Asp	Gly	Ser	Ser
		35					40					45			
Lys	Tyr	Tyr	Ala	Asp	Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp
	50					55					60				
Asn	Ser	Lys	Asn	Thr	Leu	Tyr	Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu
65					70					75					80
Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Asp	Gly	Gly	Pro	Arg	Trp	Phe
			85						90					95	
Leu	Ala	Ser	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser
			100					105					110		
Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Cys	Ser	Arg
		115					120					125			
Ser	Thr	Phe	Arg	Glu	His	Ser	Gly	Pro	Gly	Leu	Pro	Gly	Gln	Gly	Leu
	130					135					140				
Leu	Pro	Arg	Xaa	Gly	Asp	Gly	Val	Val	Glu	Leu	Arg	Arg	Ser	Asp	Gln
145					150					155					160
Xaa	Arg	Ala	Gln	Phe	Pro	Ala	Val	Leu	Lys	Val	Glu	Ile	Val	Xaa	Val
			165						170					175	
Gln															

<210> 62
 <211> 153
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(153)
 <223> Xaa = Any Amino Acid

<400> 62
 Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly Glu Arg Ala Thr
 1 5 10 15
 Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Gly Ser Lys Asn Gln
 20 25 30
 Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu
 35 40 45
 Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe
 50 55 60
 Arg Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
 65 70 75 80
 Gln Ala Glu Asp Val Ala Val Tyr Phe Cys His Gln Tyr Tyr Ser Thr
 85 90 95
 Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val
 100 105 110
 Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
 115 120 125
 Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Leu Tyr Arg Lys
 130 135 140
 Pro Arg Thr Arg Lys Val Xaa Pro Thr
 145 150

<210> 63
 <211> 139
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(139)
 <223> Xaa = Any Amino Acid

<400> 63
 Arg Asp Pro Pro Gly Trp Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
 1 5 10 15
 Phe Ile Phe Xaa Asn Tyr Xaa Met His Trp Val Arg Gln Ala Pro Gly
 20 25 30
 Lys Gly Leu Glu Trp Val Ala Ile Ile Trp Tyr Asp Gly Ser Ser Lys
 35 40 45
 Tyr Tyr Ala Asp Ser Xaa Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn
 50 55 60
 Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
 65 70 75 80
 Thr Ala Asp Val Leu Leu Cys Glu Arg Arg Leu Gly His Gly Gly Phe
 85 90 95

Ser Leu Leu Thr Thr Gly Ala Gln Gly Asn Xaa Xaa Xaa Pro Xaa Ser
 100 105 110
 Ser Xaa Leu Tyr Xaa Arg Ala Xaa Ile Xaa Ser Phe Pro Pro Gly Xaa
 115 120 125
 Pro Ala Xaa Xaa Xaa Thr Leu Arg Xaa Xaa Xaa
 130 135

<210> 64
 <211> 151
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(151)
 <223> Xaa = Any Amino Acid

<400> 64
 Phe Val Ala Val Ser Leu Gly Glu Arg Xaa Thr Ile Asn Cys Lys Ser
 1 5 10 15
 Ser Gln Ser Ile Leu Tyr Ser Ser Asn Asn Gln Asn Phe Leu Ala Trp
 20 25 30
 Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala
 35 40 45
 Ser Ile Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser
 50 55 60
 Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val
 65 70 75 80
 Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Ser Ile Pro Cys Thr Phe Gly
 85 90 95
 Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val
 100 105 110
 Phe Ile Phe Pro Pro Ser Asp Glu Pro Xaa Leu Lys Ile Trp Asn Cys
 115 120 125
 Leu Cys Cys Val Pro Cys Leu Asn Asn Phe Tyr Pro Arg Xaa Gly Gln
 130 135 140
 Ser Pro Val Glu Gly Gly Tyr
 145 150

<210> 65
 <211> 116
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(116)
 <223> Xaa = Any Amino Acid

<400> 65
 Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Tyr Xaa Trp Xaa
 1 5 10 15
 Trp Ile Arg Gln Pro Xaa Gly Lys Gly Leu Glu Trp Ile Gly Cys Phe
 20 25 30
 Tyr Tyr Xaa Gly Ser Thr Asn Tyr Asn Pro Ser Leu Lys Ser His Val
 35 40 45
 Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe Tyr Xaa Lys Leu Ser

50		55		60
Xaa Val Thr Xaa Ala Asp Thr Xaa Xaa Asn Asn Xaa Ala Arg Asp Arg				
65		70		80
Gly Xaa Val Xaa Trp Xaa Xaa Thr Xaa Thr Thr Glu Ala Xaa Glu Pro				
	85		90	95
Trp Xaa Thr Val Ile Xaa Lys Xaa Xaa Xaa Gln Xaa Xaa Pro Xaa Xaa				
	100		105	110
Xaa Xaa Xaa Xaa				
	115			

<210> 66
 <211> 159.
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(159)
 <223> Xaa = Any Amino Acid

<400> 66

Ser Leu Val Ala Xaa Leu Gly Glu Arg Pro Thr Ile Asn Cys Lys Ser				
1	5		10	15
Ser Gln Ser Val Leu Tyr Xaa Ser Lys Asn Gln Asn Tyr Leu Ala Trp				
	20		25	30
Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala				
	35		40	45
Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Arg Gly Ser Gly Ser				
	50		55	60
Arg Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val				
65	70		75	80
Ala Leu Ala Val Tyr Phe Cys His Gln Tyr Tyr Ser Thr Pro Trp Thr				
	85		90	95
Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala Pro				
	100		105	110
Ser Val Phe Ile Phe Pro Pro Ser Asp Glu His Leu Glu Ile Leu Glu				
	115		120	125
Leu Pro Leu Xaa Xaa Ala Cys Thr Asn Ser Ile Pro Arg Xaa Gly Pro				
	130		135	140
Lys Val Ser Xaa Xaa Xaa Gly Xaa Ile Thr Pro Xaa Xaa Xaa Xaa				
145	150		155	

<210> 67
 <211> 157
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(157)
 <223> Xaa = Any Amino Acid

<400> 67

Lys Pro Phe Gln Thr Xaa Pro Phe Thr Cys Thr Val Ser Gly Gly Ser				
1	5		10	15
Ile Ser Ser Gly Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly				
	20		25	30

Lys	Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Tyr	Asn	Ser	Gly	Ser	Thr	Tyr
	35						40					45			
Tyr	Asn	Pro	Ser	Leu	Gln	Ser	Arg	Val	Thr	Ile	Ser	Val	Asp	Thr	Ser
	50					55					60				
Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val	Thr	Ala	Ala	Asp	Thr
65					70					75					80
Ala	Val	Tyr	Tyr	Cys	Ala	Gly	Gln	Lys	Trp	Ser	Tyr	Tyr	Tyr	Tyr	Tyr
				85					90						95
Gly	Met	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Xaa	Ala
			100					105					110		
Ser	Thr	Xaa	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Xaa	Ser	Arg	Ser
		115					120					125			
Thr	Ser	Xaa	Ser	Thr	Asp	Gly	Xaa	Trp	Ala	Cys	Leu	Xaa	Gln	Trp	Thr
	130					135					140				
Thr	Phe	Pro	Glu	Pro	Val	Xaa	Cys	Xaa	Xaa	Trp	Xaa	Leu			
145					150					155					

<210> 68
 <211> 152
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(152)
 <223> Xaa = Any Amino Acid

<400> 68

Lys	Pro	Xaa	Glu	Thr	Xaa	Pro	Leu	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser
1				5					10					15	
Ile	Ser	Asn	Tyr	Tyr	Trp	Ser	Trp	Ile	Arg	Gln	Pro	Pro	Gly	Lys	Gly
			20					25					30		
Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Tyr	Tyr	Ser	Gly	Ser	Thr	Asn	Tyr	Asn
		35					40					45			
Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Val	Asp	Thr	Ser	Lys	Asn
	50					55					60				
Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val	Thr	Ala	Ala	Asp	Thr	Ala	Val
65					70					75					80
Tyr	Tyr	Cys	Ala	Arg	Gly	Pro	Gly	Gly	Ser	Tyr	Tyr	Tyr	Tyr	Gly	Met
				85					90					95	
Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr
			100					105					110		
Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Cys	Ser	Arg	Ser	Thr	Ser
		115					120					125			
Glu	Ser	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Gly	Gln	Gly	Leu	Leu	Pro	Arg
	130					135					140				
Thr	Gly	Asp	Gly	Val	Arg	Xaa	Asn								
145					150										

<210> 69
 <211> 131
 <212> PRT
 <213> human

<400> 69

Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Ile	Ile	Thr	Cys	Arg	Ala	Ser
1				5					10					15	

Gln	Asn	Ile	Thr	Asp	His	Leu	Asn	Trp	Tyr	Gln	Gln	Ile	Ala	Gly	Lys
			20					25					30		
Ala	Pro	Arg	Pro	Leu	Ile	Tyr	Thr	Ala	Ser	Ser	Leu	Gln	Gly	Gly	Val
		35					40					45			
Pro	Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr
	50					55					60				
Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ser	Thr	Tyr	Tyr	Cys	Gln	Gln
65					70					75				80	
Ser	Tyr	Ser	Thr	Pro	Cys	Ser	Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile
				85					90					95	
Lys	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp
			100					105					110		
Glu	Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn
		115					120						125		
Phe	Tyr	Pro													
	130														

<210> 70
 <211> 103
 <212> PRT
 <213> human

<220>
 <221> VARIANT
 <222> (1)...(103)
 <223> Xaa = Any Amino Acid

<400> 70

Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Ser	Gly	Tyr	Tyr
1				5					10					15	
Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Met	Gly
			20					25					30		
Ser	Ile	His	Pro	Asn	Ser	Gly	Gly	Xaa	Asn	Phe	Ala	Gln	Lys	Phe	Gln
		35					40					45			
Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Thr	Ser	Ile	Asn	Thr	Ala	Tyr	Leu
	50					55					60				
Glu	Leu	Ser	Arg	Leu	Arg	Ser	Asp	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala
65					70					75				80	
Arg	Asp	Lys	Asn	Tyr	Gly	Asp	Tyr	Val	Phe	Asp	Tyr	Trp	Gly	Gln	Gly
			85						90					95	
Thr	Leu	Val	Thr	Val	Ser	Ser									
			100												

<210> 71
 <211> 5
 <212> DNA
 <213> human

<400> 71
 tataac

5

<210> 72
 <211> 5
 <212> DNA
 <213> human

<400> 72

gtata

5

<210> 73
<211> 21
<212> PRT
<213> human

<400> 73
Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Pro Leu Ala Pro Cys Ser
1 5 10 15
Arg Ser Thr Ser Thr
20

<210> 74
<211> 17
<212> PRT
<213> human

<400> 74
Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
1 5 10 15
Gln

<210> 75
<211> 120
<212> PRT
<213> human

<400> 75
Val Ser Gly Gly Ser Ile Ser Ser Gly Cys Tyr Tyr Trp Ser Trp Ile
1 5 10 15
Arg Gln His Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Asn
20 25 30
Ser Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Gln Ser Arg Val Thr Ile
35 40 45
Ser Val Asp Thr Ser Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val
50 55 60
Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala Gly Lys Trp Ser Tyr
65 70 75 80
Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr
85 90 95
Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Pro Leu Ala
100 105 110
Pro Cys Ser Arg Ser Thr Ser Thr
115 120